2011 RARAF Microbeam Training Course

Schedule of Course Activities

May 2
Arrival and Orientation

- **Student's arrival.**
- **Hotel accommodations and transport coordination**
- **Dinner**

May 3

8:00 Welcome and Announcements — D. Brenner, M. Vazquez

8:20 Faculty and Student Introduction

8:40 Orientation, Safety and General Tour — S. Marino

Lecture Series: Introduction to microbeams

9:00 Lecture 1: Why Microbeams? — D. Brenner

9: 30 Lecture 2: Physics of Microbeams — G. Randers-Pehrson

10:15 Coffee Break

10:30 Lecture 3: Microbeam Facilities — G. Randers-Pehrson

11:15 RARAF Technical Tour — S. Marino

12:15 Lunch Break

Lecture Series: Biology of Microbeams

13:30 Lecture 4: Nuclear Effects, DNA Damage/Repair — C. Geard

14:15 Lecture 5: Cytoplasmic and Bystander Effects — T. Hei

Microbeam Laboratory 1: Wet Laboratory Activities

15:15 Demo 1: Cell Culture Techniques — B. Ponnaiya

16:00 Demo 2: Microbeam Irradiation/Foci induction — A. Bigelow

17:00 Coffee Break

17:15 Microbeam Experimental Design-Planning — M. Vazquez

18:00 General Discussions

19:00 Dinner

May 4

8:00 Daily Announcements **M. Vazquez, S. Marino**

Microbeam Laboratory 2: RARAF Irradiation

Part A:

8:30 Start up and accelerator stabilization

9:00 Biology Samples Check-up

9:15 Beam Tuning and Beam Characterization

Part B:

11:00 Physics and Biology Irradiation and Demos

Part C

18:00 Post Run Discussion and Evaluation

19: 00 Dinner

May 5

8:00 Daily Announcements **M. Vazquez, S. Marino**

Microbeam Laboratory 3

8:30 Sample imaging capture and analysis

12:00 Lunch Break

13:00 Student Impressions

Lecture Series: Microbeam Facilities and Users

Microbeam Facility Development

14:30	**Lecture 6: X-Ray Beam**	**A. Harken**
14:45	**Lecture 7: Micro fluidic System and Optical Tweezers**	**G. Garty**
15:00	**Lecture 8: Neutron Beam**	**Y. Xu**
15:15	**Lecture 9: UV laser Micro-spot**	**A. Bigelow**

RARAF Microbeam Facility User Showcase

15:30	**Lecture 10: 3-D Systems: Skin**	**S. Amundson**
16:00	**Lecture 11: In Vivo Models**	**B. Ponnaiya**

16:30 Microbeam User Desires

17:00 General Discussion

18:00 Closing Ceremony and Issue Certificate of Completion

20:00 Social Event